



EUROPEAN SEARCH REPORT

Application Number

EP 23 16 7915

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DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 6 499 671 B1 (SANDS DAVID ALAN [US] ET AL) 31 December 2002 (2002-12-31)	1, 6	INV. B01F23/232
A	* column 1, line 6 - line 9 * * column 4, line 47 - column 5, line 54 * * column 6, line 44 - line 53 * * column 7, line 63 - line 58 * * figures *	2-5, 7-15	B01F23/237 B01F25/312 B01F25/433 B01F25/4314 B01F25/431 B01F33/502
X	US 2 990 885 A (BRAZIER JACK H) 4 July 1961 (1961-07-04) * column 1, line 57 - column 3, line 55 * * figures *	1-5	B01F23/20 A01M7/00 B05B1/26 A01G25/09
X	US 2012/034106 A1 (LECOFFRE YVES [FR] ET AL) 9 February 2012 (2012-02-09)	1, 2	
A	* paragraph [0001] * * paragraph [0056] - paragraph [0067] * * figures 1, 5 *	3-5	
X	WO 2020/095224 A1 (M M S R L [IT]) 14 May 2020 (2020-05-14)	1, 6, 7, 9	TECHNICAL FIELDS SEARCHED (IPC)
A	* page 1, line 1 - line 8 * * page 4, line 26 - page 6, line 23 * * page 10, line 4 - page 11, line 12 * * page 11, line 28 - page 13, line 5 * * figure *	2-5, 8, 10-15	B01F A01M B05B A01G
X	WO 2011/146964 A1 (F B TECHNOLOGIES PTY LTD [AU]; SEWELL PAUL [AU] ET AL.) 1 December 2011 (2011-12-01)	1, 6-8	
A	* page 1, line 3 - line 8 * * page 1, line 19 - line 32 * * page 10, line 24 - page 11, line 17 * * page 12, line 5 - line 15 * * page 13, line 7 - line 11 * * page 23, line 33 - page 26, line 14 * * figures 11, 14, 15 *	2-5, 9-15	
The present search report has been drawn up for all claims			

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EPO FORM 1503 03.82 (P04C01)

Place of search

The Hague

Date of completion of the search

28 February 2024

Examiner

Real Cabrera, Rafael

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document



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EPO FORM 1503 03/82 (P04C01)

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2006/038298 A1 (GROW CO LTD [JP]; TAKADA NORIKAZU [JP]) 13 April 2006 (2006-04-13)	1, 6, 7, 9	
A	* paragraph [0002] * * paragraph [0017] - paragraph [0019] * * paragraph [0026] - paragraph [0031] * * figures *	2-5, 8, 10-15	
X	EP 1 900 693 A1 (OHR LAB CORP [JP]; UEMATSU HIDETO [JP]) 19 March 2008 (2008-03-19)	1, 2, 6, 7, 10	
A	* paragraph [0025] * * paragraph [0028] - paragraph [0029] * * figures 1, 2, 3 *	3-5, 8, 9, 11-15	
X	GB 2 593 190 A (TEESSIDE UNIV [GB]; UNIV OF MALAYA [MY]) 22 September 2021 (2021-09-22)	1, 2, 6-10	
A	* page 1, line 4 - line 5 * * page 8, line 20 - line 28 * * page 10, line 2 - line 19 * * figures 2A, 2B, 4 *	3-5, 11-15	
X	WO 03/076057 A1 (SASAKURA ENG CO LTD [JP]) 18 September 2003 (2003-09-18)	1, 2, 6, 7, 10	
A	* paragraph [0015] - paragraph [0017] * * figure 2 *	3-5, 8, 9, 11-15	
X	EP 3 530 347 A1 (TOSSLEC CO LTD [JP]) 28 August 2019 (2019-08-28)	1, 6, 11	
A	* paragraph [0001] * * paragraph [0013] * * paragraph [0020] - paragraph [0022] * * paragraph [0025] * * figures 1, 2 *	2-5, 7-10, 12-15	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 28 February 2024	Examiner Real Cabrera, Rafael
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



LACK OF UNITY OF INVENTION SHEET B

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-9

Mixing device comprising a mixing chamber, the mixing device comprising a first and a second portion with larger diameter and a third section with a smaller diameter interposed between the first and second portions, the first portion including the mixing chamber, and other features.

1.1. claims: 1-5

Mixing device comprising a mixing chamber, the mixing device comprising a first and a second portion with larger diameter and a third section with a smaller diameter interposed between the first and second portions, the first portion including the mixing chamber.

1.2. claims: 6-8

Machine for producing ozonated water comprising a mixing device and a mixing pipe, the mixing pipe comprising at least a first section having a spiral extension.

1.3. claim: 9

Machine for producing ozonated water comprising a mixing device and a mixing pipe, the mixing pipe comprising at least a second section including an inner surface having one or more guides having a helical development.

2. claim: 10

Machine for producing ozonated water comprising a mixing device and a mixing pipe, the machine comprising at least one first and second mixing device and at least one first and second mixing pipe.

3. claims: 11-15

System for spraying ozonated water comprising at least one high pressure pump to feed the water with a pressure greater than 150 bar.

Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 23 16 7915

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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ON EUROPEAN PATENT APPLICATION NO.

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28-02-2024

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